

ABSTRACT OF THE DISCLOSURE

A data processing system using an enhanced application of a fast kernel trap, or kernel function call, in combination with a kernel system call to provide an improved system of handling complications during kernel thread operations. In the event of a complication, such as an access exception or software interrupt, during kernel function call processing, the kernel function call promotes to a system call which handles the complication. If the kernel function call holds a spin lock at the time of promotion, the spin lock is released. Kernel function call processing is divided into phases and a phase identifier is provided to the system call. To avoid repeating processing steps already performed by the kernel function call, system call processing begins at the phase where the complication occurred. When the system call processing reaches a suspend phase, the system call will demote to a kernel function call and release its kernel stack.